

What is claimed is:

1. A crystalline form of an HPTPbeta catalytic domain having unit cell dimensions of $a=62\pm 1$ Å, $b=72\pm 1$ Å, and $c=70\pm 1$ Å, $\alpha=90^\circ$, $\beta=93\pm 3^\circ$, $\gamma=90^\circ$ in the space group $P2_1$ (monoclinic form) or unit cell dimensions of $a=39\pm 1$ Å, $b=71\pm 1$ Å, and $c=120\pm 2$ Å, $\alpha=90^\circ$, $\beta=90^\circ$, $\gamma=90^\circ$ in the space group $P2_12_12_1$ (orthorhombic form).
2. A method of identifying a compound useful for the treatment of an angiogenesis mediated disorder, comprising the steps of:
 - a. using a three-dimensional (3D) structure of HPTPbeta catalytic domain as defined by the atomic coordinates of Figures 7-102; 103-201; 202-252; and 253-304; or combination thereof; and
 - b. employing said 3D structure to design, modify, or select a compound that binds HPTPbeta *in silico*.
3. A method of identifying a compound useful for the treatment of an angiogenesis mediated disorder, comprising the steps of:
 - a. providing an HPTPbeta catalytic domain crystal;
 - b. exposing the crystal to a compound in an aqueous media to form a crystal/compound complex;
 - c. irradiating the exposed crystal with X-rays to generate a diffraction pattern;
 - d. capturing the pattern to a recording device to generate diffraction data;
 - e. processing the data to solve the complex structure;
 - f. determining location and binding geometry of compound within complex structure;wherein the compound binding to one or more binding sites of HPTPbeta catalytic domain, indicates the compound is useful for the treatment of the angiogenesis mediated disorder.
4. A method of identifying a compound useful for the treatment of an angiogenesis mediated disorder, comprising the steps of:
 - a. providing an HPTPbeta catalytic domain - compound co-crystal;
 - b. exposing the complex crystal to X-rays to generate a diffraction pattern;
 - c. capturing the pattern to a recording device to generate diffraction data;

- d. processing the data to solve the complex structure;
- e. determining the location and binding geometry of compound within complex structure;

wherein the compound binding to one or more binding site of HPTPbeta catalytic domain, indicates the compound is useful for the treatment of angiogenesis mediated disorder.

5. A method of identifying compound useful for the treatment of an angiogenesis mediated disorder, comprising the steps of:
- a. selecting compounds based on computer-aided drug design (CADD) using structural coordinates described in Figures 7-304;
 - b. analyzing if the compound, binds or modulates HPTPbeta in an *in vitro*, *in vivo*, or *ex vivo* assay; and
 - c. identifying those compounds that bind or modulates HPTPbeta as compounds useful for the treatment of an angiogenesis mediated disorder.